

IN THE CLAIMS

Please amend the claims as shown below. Please cancel Claims 17 and 26 without prejudice. This listing of claims will replace all prior versions and listings of claims in the Application.

1-17. (Cancelled)

18. (Currently Amended) ~~The oscillator system of claim 17 wherein the first oscillator further comprises:~~ An oscillator system for generating timing signals, comprising:

a first oscillator containing gain and non-linear elements; said first oscillator comprising:

a first center-tapped transmission line;

a second center-tapped transmission line, operated out of phase with the first transmission line;

a first oscillating circuit connected to one end of the first transmission Line and one end of the second transmission line; and

a second oscillating circuit connected to the opposite end of the first transmission line and the opposite end of the second transmission line;

a second oscillator containing gain and non-linear elements;

a first coupler for coupling a first signal from the first oscillator accessed at a point between the output of the gain element of the first oscillator and the input of the non-linear element of the first oscillator, to said second oscillator at a point between the output of the gain element of the second oscillator and the input of the non-linear element of the second oscillator; and

a second coupler for coupling a second signal from the second oscillator accessed at a point between the output of the gain element of the second oscillator

and the input of the non-linear element of the second oscillator, to said first oscillator at a point between the output of the gain element of the first oscillator and the input of the non-linear element of the first oscillator.

19. (Original) The oscillator system of claim 18 wherein the second oscillator further comprises:

a first center-tapped transmission line;

a second center-tapped transmission line, operated out of phase with the first transmission line;

a first oscillating circuit connected to one end of the first transmission line and one end of the second transmission line; and

a second oscillating circuit connected to the opposite end of the first transmission line and the opposite end of the second transmission line.

20. (Original) The oscillator system of claim 18 wherein the first oscillating circuit further comprises a negative resistance amplifier.

21. (Original) The oscillator system of claim 20 wherein the second oscillating circuit further comprises a negative resistance amplifier.

22. (Previously Presented) The oscillator system of claim 18 wherein the first oscillating circuit comprises:

a first coupling network, whose input is coupled to the second transmission line;

a second coupling network, whose input is coupled to the first transmission line;

a first pulse-forming network, whose input is coupled to the first coupling

network and whose output is coupled to the first transmission line; and

a second pulse-forming network, whose input is coupled to the second coupling network and whose output is coupled to the second transmission line.

23. (Previously Presented) The oscillator system of claim 22 wherein the second oscillating circuit comprises:

a first coupling network, whose input is coupled to the second transmission line;

a second coupling network, whose input is coupled to the first transmission line;

a first pulse-forming network, whose input is coupled to the first coupling network and whose output is coupled to the first transmission line; and

a second pulse-forming network, whose input is coupled to the second coupling network and whose output is coupled to the second transmission line.

24. (Original) The oscillator system of claim 17 wherein the first coupler further comprises a capacitive summing network.

25. (Original) The oscillator system of claim 17 wherein the first coupler further comprises a resistive summing network.

26. (Cancelled)

27. (Currently Amended) ~~The method of claim 26~~ A method for generating high frequency oscillations, comprising:

producing first oscillations in a first oscillator containing first gain and non-linear elements wherein said producing first oscillations ~~further~~ comprises:

operating a first center-tapped transmission line out of phase with a second transmission line;

providing a first oscillation signal connected to one end of the first transmission line and one end of the second transmission line; and

providing a second oscillation signal connected to the opposite end of the first transmission line and the opposite end of the second transmission line;

producing second oscillations in a second oscillator containing second gain and non-linear elements;

producing a phase shift in the first oscillator by coupling the second oscillations, said second oscillations derived from a point between said second gain and said second non-linear elements, to said first oscillator at a point between the output of the gain element of the first oscillator and the input of the non-linear element of the first oscillator; and

producing a phase shift in the second oscillator by coupling the first oscillations, said first oscillations derived from a point between said first gain and said first non-linear elements, to said second oscillator at a point between the output of the gain element of the second oscillator and the input of the non-linear element of the second oscillator.

28. (Previously Presented) The method of claim 27, further comprising:
tuning the first transmission line with a first plurality of capacitors; and
tuning the second transmission line with a second plurality of capacitors.

29. (Previously Presented) The method of claim 28, wherein said tuning the first and second transmission lines further comprise tuning with variable capacitors.

30. (Previously Presented) The method of claim 27 wherein said providing

the first oscillation signal further comprises obtaining the first oscillation signal from a negative resistance amplifier.

31. (Previously Presented) The method of claim 30 wherein said providing the second oscillation signal further comprises obtaining the second oscillation signal from a negative resistance amplifier.

32. (Previously Presented) The method of claim 27 wherein said providing the first oscillation signal further comprises:

coupling the first transmission line to a first pulse forming network; coupling the second transmission line to a second pulse forming network; coupling the output pulses from the first pulse forming network to the second transmission line;

coupling the output pulses from the second pulse forming network to the first transmission line.

33. (Previously Presented) The method of claim 32 wherein said providing the second oscillation signal further comprises:

coupling the first transmission line to a first pulse forming network;
coupling the second transmission line to a second pulse forming network;
coupling the output pulses from the first pulse forming network to the second transmission line;

coupling the output pulses from the second pulse forming network to the first transmission line.

34-35. (Cancelled)